

PRESENTATION FRETWORK DESIGN WITH THIS NUMBER.

Hobbies

. A. Weekly. Journal. .

For Amateurs of Both Sexes.

No. 26 VOL. I.

APRIL 11, 1896.

ONE PENNY.

DESIGN, No. 26.



BREAKFAST CRUET STAND.

Màrettà Work.

Photographic Notes & Hints.
Stamp Collecting.

Electricity:—

How to Make a Shocking Coil.
Hints on Soldering.

Weekly Presentation Design.
Photographic Enlarging.

Poultry for Pleasure & Profit.
Prize Competitions.

Cycling.

A Simple Hektograph.
Correspondence, etc.

STAMPS

Week by Week.

A Philatelic Causerie by PERCY C. BISHOP,

Joint Editor of the "STAMP COLLECTORS' FORTNIGHTLY;" Ex-Editor of "THE PHILATELIC JOURNAL" and "PHILATELIC REVIEW OF REVIEWS;" General Secretary of the LONDON PHILATELIC CLUB.

BOGUS ISSUES OF STAMPS.—Concluded.



CUBA.—I recently had occasion to mention a set of bogus stamps for the Republic of Cuba, placed upon the market by speculators, and at the same time I warned *Hobbies'* readers to be chary of purchasing them. As there is (so far) no republic known as the Republic of Cuba, it follows that the stamps so inscribed must be of unofficial origin. This, it now appears, is by no means the last word concerning these "stamps." Quite by chance I have discovered, or rather recalled to my memory, the fact that these republican labels were first prepared in the year 1873. Cuba was then, as now, in a state of rebellion, and the rebels, flushed with a temporary triumph of arms, actually went the length of preparing a series of postage stamps for use in the republic they desired to establish. I cannot go so far as to say that the labels now being foisted upon the philatelic market are a remnant of the stock manufactured in 1873, but this I will say, that the design is identical in every respect. Collectors who buy these absolutely worthless labels will be purchasing waste paper at a price far above its market value.

SEDANG.—The name, at anyrate, of the Sedang swindle will be familiar to every constant reader of this paper. I appealed, in one of my earliest articles, for the loan of a set of these so-called stamps for illustrating purposes, and many

the bogus issue of Bolivia exposed last week. No country of the name of Sedang exists, and the inscriptions upon the stamps, the heraldic device, and the coinage are all sheer imagination, the work of a clever rogue who might have made an honest livelihood, had he tried to do so, as a writer of fiction. I hope that any *Hobbies'* reader who may still have a set of Sedangs in his album will at once take them out. The presence of these labels in what pretends to be a collection of postage stamps is a standing slur upon the shrewdness and good sense of all Philatelists.

TRINIDAD "PRINCIPALITY."—Here is another impudent fraud. Baron Harden-Hickey, an American gentleman with a title picked up on the Continent, recently set himself up as the Prince of Trinidad, that rocky islet off the coast of Brazil, about which Great Britain and Brazil have been at loggerheads—in a mild diplomatic way—since the middle of 1895. It seems to be quite clearly established that Harden-Hickey's motive was to make money out of his dominion of Trinidad, which is no more his than it is mine, by the issue of postage stamps. A large set of these promptly appeared, and as our design shows they were pretty enough to attract the pence of those who collect stamps simply for their artistic appearance. Fortunately the Baron's little scheme



readers promptly responded. The Sedang issue represents a still more impudent swindle than was nipped in the bud by the prompt action of the Society for the Suppression of Speculative

Stamps. All the leading dealers refused to sell them, and I doubt whether any reader of this paper is unfortunate enough to possess specimens of this particular fraud. To show the absurdity of issuing stamps for the so-called "Principality" of Trinidad, I may mention that the island is uninhabited, except by snakes and land-crabs; that to effect a landing (as our bluejackets found in January, 1895) is a matter of extreme difficulty, and, in short, that the place is simply a barren, misshapen rock, never likely to become the habitation of human beings. Of course this Trinidad must not be confused with the very important British Colony of the same name, the stamps of which are a most interesting and absorbing study.

—:O:—

COLOUR IN STAMP COLLECTING.

The proper classification of colours is one of the greatest difficulties Philatelists have to contend with. Various "colour charts" have been tried and found wanting; but a new invention just placed on the market, the "Tintometer," bids fair to set all doubts at rest. At present we are all at sixes and sevens with regard to the exact colour names to be applied to various stamps. In any stamp catalogue you will find dozens of stamps described simply as "red," and as there are reds and reds, this description is so vague as to be quite useless. Another favourite description is "mauve," but "mauve" may mean anything from pale heliotrope upwards. The "Tintometer," of which an exhibition has just been given before the members of the City of London Philatelic Club, defines any particular shade of colour with mathematical exactness. There is no doubt as to its usefulness to Philatelists, but whether it can be made and supplied at a popular price is a point upon which I have my doubts.

—:O:—

NEW ISSUES OF STAMPS.

*. Items for this department will be gratefully received from any Philatelic readers who happen to receive early information of new issues, or of impending changes in the postal arrangements of any country.

BARBADOS will probably produce in the very near future something quite new to the British Empire—a farthing postage stamp. The need for this low-priced label is due to the reduction of the rate for the local postage of newspapers. At present such newspapers are impressed with a hand stamp, lettered "Paid at Barbados;" but this is obviously only a makeshift arrangement, and not a permanency.

BULGARIA.—I have received specimens of the Prince Boris Celebration Issue (postcards and adhesives), and shall be able to include illustrations of these in my next article.

CHEFOO presents us with a *Parcels Post* issue of very handsome design. The stamps are three in number and of the values—15c., 20c., and 25c. But despite their attractiveness I strongly advise collectors to give them a wide berth, together with all other Chinese locals. They are pretty, but that is their only qualification.

FALKLAND ISLANDS' stamps are appearing now with the crown and "C.A." watermark. I have seen the 2d. plum, 9d. vermillion, and 1/- yellow-brown with this watermark.

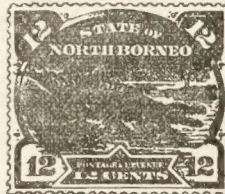
NORWAY.—The stamps of the current issue are being slightly altered in design, the word *Norge* being changed from Egyptian to Roman type. The 35 and 50 öre are the latest values to undergo this change.

SAMOA. I learn from a trustworthy correspondent, has now a postcard of its own. It is impressed with a 1d. stamp of the current adhesive design. The card itself has a greenish tinge.

—:O:—

Very shortly the headline of my article will need revision, for during the philatelic off-season I shall contribute fortnightly instead of weekly. During summer the rival attractions of cricket, tennis, cycling, and boating lure many Philatelists from their albums, but there are others who still find an hour or so for stamps, and to these I shall still cater, not "Week by Week," but fortnight by fortnight.

HOW TO BUY STAMPS.



Write to us for one of our approval sheets, upon which a discount of

4d. in the 1/- is allowed. By purchasing in this way from a wholesale firm you save agents' profits, and have the advantage of examining and choosing the stamps at home. If, when applying for approval sheet, you enclose a penny stamp for postage and quote this advertisement in *Hobbies*, we will give you 25 used stamps, all different, as an absolutely free gift; also one of our new 40-page price lists of packets, sets, albums, etc. Complete Catalogue of all stamps, 700 pages, thousands of illustrations, 1/9, post free.

WHITFIELD KING & Co., IPSWICH.

ESTAB.
1869.

A SET OF 6 UNUSED COSTA RICA FREE.

Our "Easter" Packet contains 50 stamps, all different, including Borneo, Deccan, Venezuela, Shanghai, U.S. Columbus, Canada (register), Colombia, Persia, Transvaal, South Australia "OS," Mozambique, etc., Post free, 1/1. 50 Stamp Mounts and the above set of Costa Rica given to every applicant.

✂ AGENTS WANTED. ✂

The KINGSTON STAMP CO., 44, Sykes Street, HULL.

FOREIGN STAMPS.

LOOK! LOOK! Only 7d. Our No. 8 "**POPULAR**" Packet contains 50 Stamps, all distinctly different, from the following places only, none common: Jamaica, Straits, Venezuela, Luxemburg, Japan, U.S. (Columbian), Australia, Scandinavia, Madagascar, Spain, Transvaal, Argentine, Roumania, Egypt, Sweden, Cape Victoria, England (official), Finland, Diego Suarez, New Zealand, Wurtemberg, Russia, Ceylon, Bosnia, Canada, Nossi Bé, Turkey, Greece, N.S. Wales, Belgium (Parcel Post), Java, Djibouti, Norway, Segnatesse, Denmark, Natal, Queensland, Obock, India, Mexico, Switzerland, Portugal, and Soudan. Only 7d. Selections are sent on approval, liberal discount. 36 pp. Illustrated Catalogue for Collectors, FREE. Wholesale List for Dealers, FREE. 16 pp. Exchange Circular, 3d. "Monthly Offers," or Illustrated Album Prospectus, 1d.

FISHER, TITLEY, & Co., Stamp Importers, BATH.

7s. 6d. A WEEK SALARY

and upward offered to both sexes (for spare moments) everywhere. The work may be done evenings.—Apply, enclosing addressed envelope, to **M. TRUSCOTT AND Co., Glendower, 106, Tor Vale, Torquay.**



CYCLING ACCIDENTS.

THE days when cycling was generally regarded as a most dangerous pastime are, to a great extent, gone by, but even now accidents are things to which all are liable, and I think a word or two on this subject would not be out of place at this season when so many new and inexperienced riders are just on the eve of launching out into the generally pretty smooth, but sometimes troubled, sea of cycling.

In the old days accidents usually arose from an obstruction in the road, which caused the rider of the old high bicycle to sometimes "Dive over the handles," to borrow an old-fashioned but expressive phrase which at one time was in constant use. A better position and more skill reduced this form of "cropper," among experienced riders, to a minimum, even with the tall machine, and I know a rider who rode the "ordinary" for 15 or 16 years, and who assures me that he never had a fall in this way in the course of his regular riding. The introduction of the rear-driving safety caused the "dive-over-the-handles" style of dismount to go out of fashion, as such a form of upset is practically impossible with the modern bicycle. It does not follow, however, that the rider of the "safety" of to-day cannot come to any harm. His machine may be as good and perfect, and as safe as it is possible to make it, and yet, unless reasonable care be taken, serious and even fatal accidents are at least possible, although I rejoice to say they are exceedingly rare.

The principal causes of accident are—(1) Run-away machine; (2) Sideslip; (3) Upset through collision with any obstacle or through being caught in a rut; (4) Failure of machine. No. 1 is a form of accident that may occur but seldom, but one that when it does happen is highly dangerous, and it is one against which the novice must be specially on his guard. A pneumatic-tired bicycle with a fairly high gear, say of 63 or 66 inches, is by no means an easy thing to control or stop when once it has attained a certain speed upon a steep hill, and the novice should make a point of learning, by experiment on little hills, what mastery he has over his bicycle.

I need hardly say that every rider who is not most fully experienced should carry a brake.

With an efficient brake the pace can, of course, be controlled upon almost any decline; but brakes are not perfect, neither are they absolutely reliable. More than once I have been out on a machine fitted with the ordinary "plunger" brake, and have applied it when I required, only to find that it had no effect whatever in retarding the machine. I am quite sure that had a totally inexperienced rider been in my place on one of those occasions he would have come to grief almost for a certainty. As a matter of fact, I very seldom use the brake at all, but at the time I speak of I happened to have a brake on the machine I was riding and I relied on it. I was descending a steep hill with a bend at the bottom, and was going at a rather high speed. All of a sudden I saw that round the bend was coming a large herd of cattle, which completely filled the road. I applied the brake, and, as I stated above, it would not act, and I was in a fix. Fortunately I managed to regain my pedals without causing an upset, and then just managed, though not without great difficulty, to slow down sufficiently to allow of jumping off behind just in time. The reason for the brake failure in this case was that the little set screws which fix the brake rod were not quite tight. These set screws are necessary in order to allow for the shortening or elongation of the brake rod when the handle bar is lowered or raised. Should a rider have occasion to adjust his handle bar he must therefore be especially careful to see afterwards that the brake set screws are firmly fixed. Unless they are quite tight the rod will easily slip past them when the brake is put on hard, just as it did in my case.

A novice should never depend absolutely and entirely on his brake. An expert will ride down a very steep hill, and at a slow pace, without using a brake at all. This is done by "back pedalling," an accomplishment with which all riders should be familiar. When one has to back pedal at any speed the chief fear is that the foot may slip off and lose its hold, in which case the machine might easily "bolt" and get beyond control before the pedal could be caught again, or the effort to regain the pedal might result in a jerk which would very likely unseat the rider. To guard so far as possible against this, good strong toe clips should be used.

Toe clips are of no use whatever as an aid to driving, but as safeguards against "missing your pedal" both in driving and in back pedalling, they are invaluable. Clips should be made to fit, otherwise they will not be of much use. They should be of broad flat steel, and the hook should be so arranged that the toe goes into it and completely fills its curve. Even with brake and toe clips, care is needed when steep hills have to be ridden down, and the novice should never let his machine get up such a speed that an almost immediate dismount could not be effected. It is sometimes possible to stop a runaway machine by placing the flat of the foot on the front wheel tyre to form a brake. That this can be, and has been, done does not prove that a novice who attempted it, when in extremes, would be safe. A novice *might* succeed in checking his machine when it had "bolted" in this way, but I am bound to say that I do not think one novice in five would have nerve and skill enough to put this idea into execution just at the critical moment. The only real safeguard against being run away with is to keep the speed strictly moderate until the bottom of the hill is full in sight and a clear run is a certainty.

Against "side slip" the chief safeguards are—(a) The obvious one of not riding over greasy bits; (b) The use of non-slipping tyres of some sort and the acquirement of the necessary riding experience whereby the danger of slipping may be minimised. Of (a) little need be said; but everyone must ride in grease at some time or other, and the novice would do well, at an early stage in his career, to try riding on wet slippery roads, and thus learn by actual experiment (there is no other way) how to do it. If he takes care to ride slowly, and keeps clear of all traffic, he cannot come to much harm. It is the novice who attempts cycling in greasy crowded streets who runs the risk. The only rule that can be given to guide the rider who has to face a slippery bit is to keep his machine upright, to pedal steadily and evenly, and never to push or to steer by jerks. When out in the country the middle of the road will almost always be found the safest from this point of view, although when riding in this way the novice must remember that should he meet a vehicle, he will probably have to turn out, possibly unto a very greasy side rut, in order to allow room to pass.

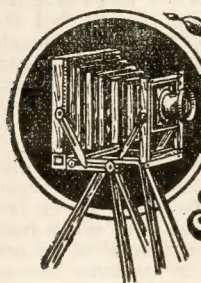
The danger from No. 3, that is of being upset through collision with a pedestrian, vehicle, or obstacle, or through being caught in a rut, is obvious, and under this heading nothing need be said; ordinary care will suffice to preserve the rider from all accidents of this description, except under very special circumstances. When riding after nightfall cyclists must, of course, exercise greater care than usual, and must remember that, although they themselves are compelled to carry a lighted lamp, yet the ordinary vehicle is, as a rule, free from this obligation. Only a short time ago a cyclist was killed in a Birmingham suburb through running into a handcart which he did not perceive in the dark. He fell on his head and fractured his skull. Ruts are sometimes sources of danger, especially to the inexperienced. A report is just to hand of a rider who was cycling along a cliff road, when his machine caught a rut; this caused an upset, and somehow or other the un-

fortunate man fell over the cliff and was killed. Ruts should be avoided when possible, but the rider who finds himself suddenly in one should endeavour not to lose his head. It is often a good plan to sit tight and keep on driving hard in the hopes of mounting the side of the rut. Generally speaking, if the balance can be maintained for a few seconds the danger will be over. Never fall before you are obliged. This last piece of advice may sound entirely superfluous, but I should not offer it but for the fact that I have, time after time, seen riders meet danger half-way and give themselves up, and throw themselves off their machines because they felt certain that a fall could not be avoided; but a number of such falls *can* be avoided if the rider will only keep his head and do his best.



The fourth cause of accident, resulting from failure or breakdown of the machine, is also fortunately very rare, and with improved methods of manufacture, and perfection of material, accidents of this sort should soon be almost impossible. Such risk as there is on this score arises from using very light racing machines on the road, or from riding altogether inferior and unreliable bicycles. If both these are avoided, and every sensible rider will avoid them, the danger from this source becomes very small indeed. The same remarks about never "giving your neck" might be applied here as in the last case. It is quite possible, even in the event of a serious breakdown, to escape injury, if the rider will but keep cool and "sit tight."

One sees plenty of instances of the value of nerve on the racing path. I once saw a man fall and another rider who was immediately behind him seemed doomed to a certain spill over his comrade. He did not intend, however, to bite the dust until he was obliged, so instead of crashing into his fallen friend and going down like a ninepin, as many a man would, he simply held straight ahead (to have swerved at five-and-twenty miles an hour would have been fatal). His effort succeeded, and although the "bump" caused him to jump up a foot from his saddle, he held tightly to his handles, kept his head, dropped safely into his saddle again, and having ridden right over the prostrate machine, he continued his course none the worse for this performance. I give this as one of many instances that have come under my notice of what may be called hairbreadth escapes.



PHOTOGRAPHY

for Amateurs

NOTES OF THE WEEK.

THE Photographic Exhibition arranged to be held at Glasgow, under the auspices of the Corporation, will be open for four months.

A new industry has cropped up in New York in connection with photographs. It is the printing of prominent portraits of professional men and women for the decoration of cigarette packets. A wholesheet of paper is printed at once, the negative being made from a number of cabinet photographs mounted on one large sheet of paper. Machinery is used extensively, and each operation is performed in separate rooms. The extent of the business can be imagined when we say that one factory only uses, we understand, some 7,000 reams of albumenised paper in the course of the year.

Mr. George Davison, writing recently upon "Pictures in Journalism," refers at some length to the work done and that may be done by the photographer. He concludes an able article by saying:—"One can but think it will become a common thing for picture papers or central illustration agencies to have their own staff of photographers constantly at work to provide material for successive issues, portraiture, reproductions of paintings, illustrations of current topics and incidents. Whether it would pay a newspaper thus to acquire its own copyrights may be questionable, but such a course would afford a discriminating manager the opportunity of organizing a specially-skilled staff, capable of providing a regular supply of illustrations of consistent quality."

We have before referred to the Traill Taylor Memorial Fund. The sum already received is something more than £200, but as the prime movers in the matter are desirous of establishing a lectureship on Photography, to keep green the memory of the late genial editor of the *British Journal of Photography*, a much larger sum will be required before the scheme can be carried out.

Messrs. Iliffe & Son from time to time have brought out many useful books upon Photography, but the one before us, *The Photographic Reference Book*, compiled by W. A. Watts, M.A., is perhaps the best one that has yet appeared. Whilst it is a veritable photographic encyclopædia, it contains just those many things that the earnest student requires, and not a record of ancient history. The book numbers some 300 pages, and deals with eight hundred subjects,

which include some twenty chapters, covering Cameras, Chemicals, Development, Enlarging, Exposure, Fixing, Lantern Slides, Lenses, Mounting, Negatives, Papers, Plates and Films, Portraiture Printing, Process Work, Subjects, Studio and Dark Room, Toning, Varnishing, &c., &c. The Book is published at 6s. [The Manager of the Supply Department can forward the book post free for this sum.]

A member of the Camera Club has been in communication with the Director of the National Gallery in regard to the admission of amateur photographers to the Gallery, under proper restrictions, to copy pictures by means of the camera and lens. Everyone interested in Photography must regret that, so far, the Director has very positively stated that amateur photographers can not be admitted. We are glad to know that this decision is being very strongly protested against, and consider that regulations could easily be framed that would check the too arduous photographer and still permit of the permission being given to those qualified to copy pictures, although they do not rank as professional photographers.

In a magazine, published in 1851, we recently came across the following paragraph:—"It has been found impossible to take daguerotypes or collotypes in Mexico, Chili and Peru, owing to the deficiency of *actinic* power in the sunbeams of tropical regions." This seems strange to us, as certainly, from South America, we have received most beautiful photographs.

The question is often asked, how shall I store my negatives? The cheapest plan is probably to place each negative in a paper envelope, and on the outside give title and the conditions under which the negative was taken. These can then be put away in empty plate boxes. On one edge of the box a list of the negatives should be arranged and the boxes put upon shelves as if they were books. Method in keeping negatives is as necessary as with any other hobby.

Readers of *Hobbies* may want to take photographs of glass vessels, and naturally will desire to bring out any engraved work upon them to the best advantage. A German Photographic Journal advises the following method to be adopted:—"In order to reduce the vigour of the impression of the back surface, the front side of the glass should be rubbed with powdered talc and lightly dusted with a soft cloth, so as to leave the talc only on the etched or engraved

portion. The vessel should then be filled with a very dilute solution of permanganate of potash. This will ensure a clear impression of the etching or engraving.

At the London Provincial Photographic Association, Mr. Snowden Ward, in the course of a lecture upon the "New Photography," said that a radiograph had been made through a packet which contained a dozen sheets of bromide paper upon a dry plate, and that an equally good image had been obtained upon all the sheets of paper and upon the plate underneath. The wonders of this new photography seem to be inexhaustible.

It will interest some of our readers to know that lenses can be separated by being placed in a vessel of cold water, to which hot water is gradually added until the heat is sufficient to soften the cement so as to allow the lenses to be taken apart. They can then be cleaned with pure turpentine, and re-cemented by using fresh Canada balsam. For this purpose the concave lens is gently and slowly warmed, and a drop of warm fluid Canada balsam placed in the middle of the concavity. The convex lens, which has also been similarly heated, is then placed centrally over the pool of balsam and gradually pressed downwards until it is in close contact with the concave, and the superfluous balsam is pressed out. It is not wise to take lenses apart, but sometimes a marking, for some unexplained reason, appears, and more often than not it is between the two lenses. In such a case the directions given above may be acted upon.

A French journal has published the following formula and instructions for utilising old albumenised paper:—Print much deeper than usual, wash the prints in warm water before fixing at a temperature of 100 to 125 degrees Fahrenheit, and tone in the following bath:—

A.			
Water .. ..	..	..	6 ozs.
Chloride of Gold ..	..	..	6 grs.
B.			
Water .. ..	..	..	6 ozs.
Precipitated Chalk ..	..	..	150 grs.

This solution must be well shaken and then one drop of hydrochloric acid should be added. The mixture should stand for twenty-four hours before using. When toning is complete, wash and fix in the ordinary way.

Our readers will have been away for their Easter holidays, and doubtless many will have visited seaside resorts and shipping districts. We have therefore arranged for the April Photographic Competition to be for "Marine Views and Shipping." We hope there will be a large number of competitors. Our Photographic Editor will this month give three additional "Consolation" prizes.



The New Patent SOUND DISCS

Completely overcome DEAFNESS and HEAD NOISES, no matter of how long standing. Are the same to the ears as glasses are to the eyes. Invisible. Comfortable. Worn months without removal. Explanatory Pamphlet Free.

PHOTOGRAPHY FOR BEGINNERS.

EVERYONE SHOULD READ THIS.

Mr. R. M. JACKSON, Buxton, writes: "I received your 3s. 6d. Camera Set safely, and I beg to state that I have never seen anything so wonderful before for the money. I have never taken a photograph before, but I easily took a splendid one with the Camera which you sent me, which is a marvel for the money."

The Improved ECLIPSE CAMERA SET.

Price 3s. 6d.

Consists of a full $\frac{1}{4}$ -Plate Sliding-Bellows Camera (taking Pictures up to $4\frac{1}{2}$ by $3\frac{1}{2}$ inches), made of solid Mahogany, polished, fitted with a good Double-convex, Brass-mounted Lens, improved Dark Slide, Light-proof Focussing Screen, improved Focussing Arrangement, packet of Dry Plates, Developing and Fixing Solutions, and full instructions, enabling any amateur to take a good Photograph. Price 3s. 6d.; or securely packed by parcels post, 4s.

COMPLETE PHOTOGRAPHIC OUTFIT.

Price 7s. 6d.



Comprising Eclipse Camera Set, as above; also Photographic Printing Apparatus, with Hardwood Folding Tripod and Focussing Cloth. Price 7s. 6d.; post free, 8s. 6d. If in Wood Case, with Hinged Lid and Strap, as Illustrated, 1s. extra, post free.

21/- The YOUTH'S GUINEA COMPLETE 21/-
OUTFIT.

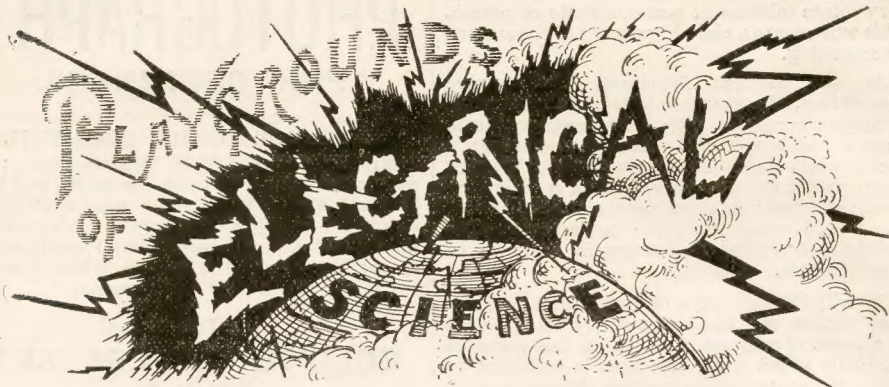
For Plates $4\frac{1}{2}$ by $3\frac{1}{2}$ in.

Containing our famous "Half-Guinea Camera Set," with complete Printing Apparatus, Ruby Lantern, Focussing Cloth, in well-made Box with Hinged or Sliding Lid and Leather Strap for convenience in carrying; also Folding Hardwood Tripod, and Full Instructions. Price 21s. Ditto, for plates $6\frac{1}{2}$ by $4\frac{1}{2}$, price 42s.

For full particulars of more expensive Cameras, ranging in price from one to twelve guineas, see our new and fully illustrated catalogue of Photographic Apparatus.

Price 2d., post free.

J. H. SKINNER & Co.,
H Dept., DEREHAM, Norfolk.



HOW TO MAKE A SHOCKING COIL.



THE instrument about to be described is designed somewhat on the principle of the Induction Coil already described in the pages of *Hobbies*. The use of the Shocking Coil is too well-known to need any explanation.

It will be found easier to make the stand first, as every part is fitted to it. Procure a well-seasoned piece of mahogany about 8 inches long, 4 inches wide, and half-an-inch thick. This should be nicely planed and the edges chamfered off. Two pieces of the same wood, 2 inches square, should be cut for the bobbin ends. All woodwork when finished should be soaked in melted paraffin wax for about half-an-hour, and while still warm should be rubbed dry with a piece of soft rag.

A piece of thin brass triblet tube should now be procured, $2\frac{1}{2}$ inches long, and $\frac{3}{8}$ -inch diameter (inside); a small piece of wood should be turned to fit one end of this tube to serve as a handle, as in Fig. 1.

A number of lengths of soft iron wire are required for a core. This wire should be of the best annealed No. 20 gauge; about seventy wires are required, each 3 inches long. The brass tubes should be filled with these wires as tightly as possible, and all cut exactly the same length so that they project $\frac{1}{2}$ -inch from the end of the tube. The ends require soldering. To do this first take some soldering fluid and dip the projecting ends of the iron wire into it, and then dip them into some melted solder previously prepared. Allow it to cool and file off the superfluous solder so that it will enter the tube, then treat the other end of the bundle in the same way. The core may afterwards be laid aside until it is required.

A paper tube must be made to cover the brass tube. Roll a piece of glazed writing paper several times round the brass tube so as to completely cover it. Then take a piece of stout brown paper 12 inches long by $2\frac{1}{2}$ inches wide and glue it round the paper on the tube, taking care not to attach it to the writing paper. When the glue is dry it may be drawn off the

tube and the paper taken out. The roll of writing paper is used so that the internal diameter of the brown paper tube may be greater than the external diameter of the brass tube. This allows the brass tube to be drawn in and out more easily. The brown paper tube may be soaked in paraffin wax for a few minutes and then wiped dry.

Now take the two wooden bobbin ends and bore a hole in the centre of each, just large enough to admit the ends of the brown paper tubes; these may be glued on the ends of the tube so as to make a bobbin with square flanges, taking care to place each flange square with the other, as in Fig. 2.

This done, the primary coil should be wound. About two ounces of No. 24 silk-covered wire are required. For this wind the wire round the bobbin from end to end continuously, placing a sheet of wax paper between each layer. Two layers should be wound on; this will bring the ends to the same flange. About six inches of wire should be left at each end for connections; these ends should be led through holes in the flange. The primary coil may now be covered with several layers of paper well soaked in paraffin wax and glued on.

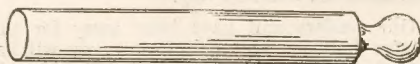


FIG. 1.

The secondary coil must next be considered. For this two ounces of No. 36 silk-covered copper wire will be necessary, and before using should be tested for continuity. This secondary wire should be wound over the primary so that the beginning is at one flange and the end is at the other. When winding, a sheet of paraffin waxed paper should be placed between each coil, and the coils well painted with paraffin wax. This insulating must be most carefully attended to, otherwise the insulation may break down at any time and cause great trouble and inconvenience. When the winding is finished the wire should be covered with several layers of waxed paper and then with a piece of silk

velvet. The ends of the secondary wire should be connected to two terminals which are screwed to the tops of the bobbin flanges.

A strip of paper, half-an-inch wide, should be rolled and glued round one end of the iron core about $\frac{1}{4}$ -inch from the end until it fits the brown paper bobbin. The brass tube may then be slipped on the iron core until it reaches the paper collar; then slip them handle first into the bobbin from the end in which the primary wires are inserted. Before pushing them home, the paper collar on the core should have a coat of glue and then be pressed in so that the collar is flush with the bobbin flange. The bobbin may now be screwed in the centre of the base.



FIG. 2.

We have here to fit up a contact breaking arrangement. For this a brass contact pillar fitted with platinum adjustment, a pillar similar to the above, but without the screw, a piece of German silver strip, and a small circular flat piece of iron are required. Take the German silver strip, which should be about 2 inches long by $\frac{1}{4}$ -inch wide, and rivet the piece of iron to it. This piece of iron is for the armature, and should be $\frac{1}{8}$ -inch in diameter by $\frac{1}{2}$ -inch thick. The other end of the German silver should be screwed to the armature pillar. The armature spring and pillar should be screwed to the base, so that the armature faces the core at a distance of $\frac{3}{16}$ -inch. Before screwing it to the base a piece of platinum should be soldered to the centre of the German silver spring. Now take the contact pillar and screw it to the base so that the platinum point touches the centre of the platinum on the spring.

The coil is now complete and only requires connecting up. Take the right hand end of the primary wire and connect it to the base of the armature pillar; then take the remaining end to the terminal G. A short piece of wire should be used to connect the other terminal to the Regulator Handle; D, Bobbin Flanges; E, contact pillar. These connections are shown in Fig. 3. A is the Base; B, Bobbin; C, Armature Pillar; F, Contact Pillar; G, Terminals. A pair of handles are now required to permit future victims to receive shocks. Cut two pieces of brass tube similar to that used for the regulator, but about three or four inches long, and solder to one end of each of these a piece of brass wire bent round so that both ends can be soldered to the tube. To the centre of the brass loops a length of tinsel cord should be twisted and the other ends connected to the secondary terminals of the coil. This tinsel cord is similar to that used for telephone receivers. Some regulating is now necessary, but to do this a battery will be required.

THE BATTERY.—The battery mostly used for this kind of work is known as the Chromic Acid Cell. To make it, procure a glass or stoneware

jar, about four inches deep and three inches in diameter. Also procure a piece of bar zinc as long as the jar is deep and one inch wide. Two pieces of carbon the same size as the zinc are also necessary. These elements should be clamped together with strips of wood, so that the zinc is placed between the carbons, being separated from them by strips of wood. These strips of wood should be half-an-inch wide and long enough to rest on the edges of the cell. All woodwork for batteries should be boiled in paraffin wax to improve the insulation, and to offer protection from the corrosive action of acids. The carbons must be connected to each other by a strip of copper.

Prepare a mixture of

Chromic Acid	..	..	3 parts.
Water	..	..	17 "
Sulphuric Acid	..	..	3 "

Dissolve the chromic acid in the water first, and then add the sulphuric acid; the solution must be allowed to cool before using. The cell should be three parts filled with the solution and the elements placed in it. The cell is now complete and ready for use.

Now obtain two lengths of No. 22 D. C. C. copper wire and connect one to the zinc element and one to the carbon element of the battery. The other ends of these wires may then be connected to the terminals.

The coil can be adjusted by turning the contact screw until the armature is in rapid vibration.

The operator may now clutch the handles and request an assistant to draw out the regulating tube very gently, when the operator himself will feel a powerful current of Electricity running through his arms. The current will be found to increase gradually in intensity until the regulator is nearly out. It is not advisable to draw the tube right out in case it proves troublesome to put back; and, as the victim cannot loosen his hold whilst the current is flowing, any delay in stopping the current might prove very unpleasant to all concerned. Should the current not prove strong enough, more cells may be added to the battery, all connected in series: that is, the zinc of one cell to the carbon of the next. Readers must not use too many cells, else a "burn out" may be confidently expected, resulting in the total destruction of the insulating material. When the core is found to get as hot as the hand can bear, no more cells are to be added. The reader need not be troubled with details of all the experiments usually made with this class of coil, but may be left to find these out for himself.

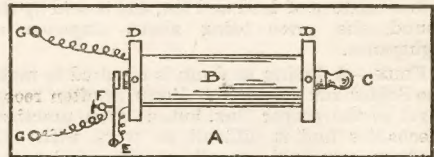


FIG. 3.

One last word,—when experimenting with the coil, do not give ladies, children, or any persons suffering from weak hearts, etc., the full strength of the current; for the coil, though small, may prove dangerous. The "Shocking" Coil is also known as the "Medical" Coil.

BENT IRON WORK

HINTS ON SOLDERING.



ENT Iron Workers and other amateurs who practice some metal work hobby often come to a standstill when Soldering has to be done. Everyone seems to have a vague idea how it *should* be done, but when a trial is made somehow or other the joint refuses to hold. Thus one or two suggestions—which are, however, solely for the amateur—may be given here.

The requisites are few and cheap, a

Soldering Iron (or Bolt), some soft Solder, and a "Flux" being the necessary items.

SOLDERING IRON.—A few pence will purchase one of these at any ironmongers, but the amateur is advised to disburse himself of the matter of one shilling or so, as for this sum he can obtain a tool which will be of genuine service, and which will last considerably beyond the first half-dozen trials. The point of the Iron should be pyramidal and not conical; that is to say, the section of the bolt should be square, and the four sides tapered off in pyramidal fashion.

SOLDER.—This may be purchased along with the Soldering Iron. Soft Solder should be asked for; it is a mixture of lead and tin, and is sold by the pound, the price being about sixpence or eightpence.

FLUX.—A fusing medium is required to make the Solder run smoothly. Resin is often recognised as the proper flux, but, as even practised mechanics find it difficult to work with this medium, amateurs are all recommended to use the widely-known "Killed Spirits." This preparation is made as follows:—Procure some pieces of Zinc, broken into small bits, and place them in an open jam jar. Into this pour some pure Hydrochloric Acid, or commercial Muriatic Acid, and allow this to stand for three or four hours, by which time the Zinc will have killed the

Acid. The jar should be kept outside, as the fumes are noxious. As the fumes in reality are Hydrogen Gas, care must be taken not to let them come in contact with any fire. So long as the Acid in the jar is, so to speak, in life, bubbles will rise to the surface. When this bubbling has stopped, the preparation is ready for use; the Acid has been killed, and the result is known as Chlorate of Zinc, or Killed Spirits.

TINNING THE IRON.—Before any actual Soldering can be done there is the task of "tinning" the Iron. Place the Iron in the fire and heat it till it is all but red; at the first sign of a ruddy glow it must be withdrawn. While warm, file a bright surface on the point to get the clean metal; then dip it into the Killed Spirits, by which process the Iron is chemically purified. Afterwards rub it on the Solder till the metal sticks; this is what is called "tinning." In using the Iron afterwards care must be taken not to heat it red hot, as it would consequently require to be retinned.



SOLDERING IRON.

SOLDERING.—The actual Soldering work is simply explained. The place to be soldered should be thoroughly well cleaned, and, if necessary, scraped with a file or emery cloth so as to reach the bright metal. Apply a little of the soldering solution—the Killed Spirits—to the joint; then pick up a bit of Solder with the hot Iron and place it on the spot till the Solder clings to the joint. No grease or dirt must be on the metal, or the Solder will not hold.

Several trials may be necessary before the amateur can make a perfectly neat joint. At first he will probably let the Solder spread, and will thus have to trim the work with a file. This, however, need not affect the security of the joint, and with a little practice the Soldering can be done without any after trimming being necessary. Although the work must necessarily be done quickly, it should not be hurried. The Iron will keep sufficiently warm for several minutes, and two or three joints can be soldered before it is necessary to place it again in the fire.

The End of Volume One.

FUTURE NUMBERS TO HAVE A COLOURED COVER.

IT is now just six months since *Hobbies* first made its appearance, and the first volume is completed by the issue of the present number. In reminding our readers of this fact we wish to express our very warm and earnest thanks for the kindly letters of congratulation—many of them expressed in enthusiastic terms—which we receive each week in ever-increasing numbers. That *Hobbies* was to prove a great success was placed beyond question from the very first. We may say, without we trust exposing ourselves to a charge of arrogance, that we planned and produced the paper with complete confidence as to the result. What we did not anticipate was that *Hobbies* would attain so great and far-reaching a measure of popularity in so short a time. The circulation of the paper already far exceeds the number which in even our most sanguine moments we hope to reach, and the circle of our readers is still widening every week with the most gratifying regularity. The really remarkable cordiality with which *Hobbies* has been received has naturally resulted in the enlarging of our views as to the scope of the paper, and we are now disposed to believe that there is practically no limit to be assigned to the possible extension of its usefulness and interest.

It is of course our desire not merely to justify the high opinion which the readers of *Hobbies* have been good enough to express of the paper, but to do all in our power to secure for it an even greater measure of popularity than it now possesses. There are, we are well aware, a number of things which are capable of improvement, and, to begin with, we propose, in deference to a generally expressed desire, to enclose all future numbers of *Hobbies* in a handsome coloured cover. This is a change which will undoubtedly meet with universal approval. There will also in the coming volume be a far greater range and variety in respect to the subjects dealt with. It is of course only natural that as the summer approaches greater attention should be devoted to Photography and other outdoor hobbies, and

for the time being less space will be accorded to such subjects as Fretwork and other distinctly indoor occupations. We have, too, been deeply impressed with the importance of giving greater consideration to the needs of our very numerous lady readers, and we think they will be fully satisfied with the arrangements made on their behalf. Fuller particulars of our programme for the summer months will be given in next week's paper. In the meantime we may express a firm belief that no one who has read the first volume will complain of any lack of interest in the second, and the new subjects which will be dealt with should result in a very large accession to our number of subscribers. Finally, it may not be out of place to again remind our readers that we are always ready to assist them in every way in our power. None need hesitate to write to us for either information or advice, and the knowledge that we have helped a correspondent out of a difficulty will fully repay us for any trouble we may incur. In the same way suggestions for increasing the interest and usefulness of *Hobbies* will always be welcomed, and will invariably be carefully considered.

HOBBIES' SUPPLY DEPARTMENT.

We again refer readers to Nos. 20 and 21 of *Hobbies* for full explanation of the Supply Department which we have recently established. We are confident that the Department will prove of the greatest service to our readers, and we are especially glad to notice the widespread interest it has already excited. All the subjects dealt with in *Hobbies* are under the control of experts, and we are only too glad to place their knowledge and experience at the disposal of all who may desire to take advantage of them. We want to make *Hobbies* an absolutely indispensable paper to all who know it, and no trouble will be spared to attain this object. We trust, then, that no reader will hesitate to write to us upon no matter how small a subject, and if there should at first be any slight delay in meeting the requirements of any of our readers, this will disappear when our Supply Department has got into thorough working order, and we are able to calculate with greater exactness the demands which are likely to be made upon its resources. We cordially invite all who think we can be of any assistance to them to write to us without delay. All letters should be addressed to The Manager, "*Hobbies*' Supply Department" Bouverie House, Salisbury Square, London, E.C.



CHAP. IV.

THE MANAGEMENT OF THE BROODY HEN.



HE sitting or broody hen is at this time of the year the most important member of the poultry family. No heiress in the upper circle of life is more run after by suitors than is this very important lady by breeders and poultry keepers who do not possess an incubator, and therefore have to depend upon the hen for hatching. The broody hen should be large and weighty, and have no trace of the Leghorn, Minorca, or non-sitting varieties. Preference should be given to a cross-bred hen, with a little feather on the legs, which indicates Cochins or Brahma bloods, as these varieties are to be depended upon. It may also be taken as a general rule that all fowls which lay brown eggs make good sitters, and are very reliable. A fat bird should be chosen, as fat will produce heat during the twenty-one days' incubation, and the germ of the egg is, of course, entirely dependent upon the heat from the body of the hen for its proper development. If it is necessary to purchase a hen, see that she is quiet, and *before* she is brought home make the nest where she is intended to sit, as it is more conducive to a successful hatch to have all ready in advance. A great deal depends upon the nest. Some breeders prefer nesting boxes, but the writer is of opinion that it is best to closely follow the dictates of nature and make the nest upon the ground, as the eggs then get the needful moisture. The soil should be nicely hollowed out, making it sufficiently deep so that the eggs be nicely settled in the bottom, or they may roll or even get kicked out; plenty of hay or straw is, of course, necessary. The circumference of the nest will depend upon the size of the hen and the number of eggs to be utilized. A ordinary size hen may be given thirteen eggs, whilst a Brahma, Orpington, or Plymouth Rock, at this season of the year would easily cover sixteen. A good sprinkling of slaked lime must, however, be first placed in the nest. This will be found not only to check vermin, but to also cement firmly the

sides of the nest. Hay will be found preferable to straw, as the former is a bad conductor of heat, whilst the latter has a tendency to convey the heat from the nest.

In sitting the hen on the ground it is wise to obtain a grocer's box without a lid, and to remove one side and place over the nest. This will serve as an excellent canopy, and all is then complete. In order to save future trouble it is wise to well dust the hen with pyrethrum powder to prevent her (and her chicks when they arrive) from being tormented with insects. Night is always the best time to remove the hen to her nest, but it is wise not to place her on the real eggs first, but to give her a few china ones just to ascertain if the bird really means business. The next night, after first seeing that the hen has been given a good feed of sound grain (not soft food), maize and buckwheat for preference, as these two grains are the best heat producers, the eggs may be placed in the nest. The hen may require to be coaxed to her post, but if properly broody, she will be found to occupy her throne with eagerness. The sitting hen is sometimes an erratic creature, and will sit anywhere but just where you want her to go, in which case she must be humoured. It is no use losing one's temper, as she is entirely the mistress of the situation, and when she has taken to her nest, nothing has to be done except to see that she leaves it each day for a few minutes. If she does this of her own will so much the better, but if not, it is wise to gently lift her off, placing the hands over each wing, and being, of course, very careful not to disturb the eggs. During the interval the hen eats, drinks, and has a good clean in the dust bath, which, by the way, must be provided, a good box of dry ashes being the best.

Great care should be taken not to give any food but hard grain, as it takes longer to digest and engenders heat in proper proportion. A nice bunch of watercress is beneficial during incubation. Should the hen by any chance forsake her eggs, the fertility may be preserved for often thirty to forty hours by packing them in hot bran or meal, and keeping them in a warm place until another hen is found. When the hen is off

the nest, examine the eggs, and if any are broken, it is important that the remaining ones should be well washed in *warm water*, as if the pores of the shell become choked, the chick will assuredly die in the shell. As a rule, on or about the twentieth day the eggs will begin to chip, but some days previous it is advisable to pour a little lukewarm water around the nest, as often the skin inside the eggs requires to be moistened. It is best to leave nature alone when hatching commences, as unnecessary interference often spoils a good brood. The shells of any of the eggs that may have been hatched should, however, be removed, and if the hen shows signs of restlessness, the chicks may be removed in a warm basket and placed near the fire until the remaining ones are hatched, when all should be placed back again very carefully under the hen. If some of the eggs show no signs of hatching for many hours after they are due, it is best to test them in very warm water, and if they contain live chicks, they will be seen to move, when they must very quickly be returned to the hen. If there is no movement you may conclude that the chick is dead in the shell.

The chicks when hatched provide one of the prettiest sights which the poultry fancier can gaze upon, the proud mother and her brood of little balls of fluff making a most attractive spectacle. Many persons coddle the chicks and try to feed them immediately they are hatched, but let it be definitely stated that *no food* is necessary for the first twenty-four hours after hatching, and none should be given, as by a wise arrangement nature has provided the chicks with sufficient sustenance for that period. It is only warmth they will require, and this the hen will provide by sheltering them closely for the first day. The hen should now be placed in a nice coop (illustrations and particulars of which will appear in the next article), and after she has had by herself a good feed, some water, and a dust bath, give her the chicks, and if a good mother she will brood them with care. The first few meals should consist of hard boiled eggs, chopped up, shells and all being mixed together and given every few hours. Even the last thing at night by aid of lamplight it is wise to give a nice meal, whilst a small portion should be placed in the run ready for the chicks at daybreak. This food should be intermixed with boiled rice, rubbed in sharps or middlings, and after a day or so give as a staple food nice hot meals of Spratt's Nutritious Chicken Meal, and in a few days good groats may be given twice a day. In our new volume we will continue the series of articles on *Poultry*, the first chapter being on the care of chickens.



AIR CUSHION STAMPS,

Will print on any surface.
ILLUSTRATED CATALOGUE
FREE.

Liberal Terms and Free
Samples for Agents.

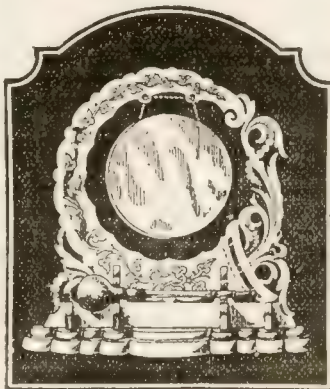
H. LINDNER,
170, Fleet St.,
London, E.C.

'Hobbies' Designs.



WING to the very heavy expense involved in the production of the Designs forming our Weekly Presentation Supplements, we cannot supply these with back numbers of *Hobbies*. Copies of them may, however, be obtained on sending *threepence* for each Design required to the Publisher of *Hobbies*, Bouverie House, Salisbury Square, London, E.C.

For the convenience of our readers we give below a complete list of the Designs already published.



No. 20. GONG STAND.

1. Midget Photo Frame, with Overlay Ornament.
2. "Aphrodite" Mirror Bracket.
3. Bent Iron Work Gong Stand.
4. Hanging Twine Box, with Overlay Ornament.
5. "Card" Inkstand.
6. Carved Adams Frame.
7. "Gasalier" Bracket.
8. Bent Iron Work Table Stand, for Cards, etc.
9. Carved Lamp Bracket.
10. Model of a Victoria.
11. "Toilet Glass" Cabinet Photo Frame.
12. "Swing-Boat" Match Holder.
13. Hanging Fretwork Calendar.
14. Bent Iron Work Grill Panel.
15. Carved Blotting Book Cover.
16. Prize Card Receiver.
17. Panel with Overlaid Ornaments.
18. Bookshelves.
19. Two Stencil Dado Bands.
20. Gong Stand.
21. Two C. D. V. Photo Frames.
22. Pipe Rack, with Mirror Back.
23. Model of a Polo Cart.
24. Swing Letter Holder.
25. Bent Iron Work Wall Mirror.
26. Breakfast Cruet Stand.

The following Designs are in preparation—

27. Occasional Table.
28. Inlaid Table Top, etc.

Our Weekly Presentation Design.

No 26.—BREAKFAST CRUET STAND.



In selecting wood for this small, but neat and graceful Pattern, care must be taken to choose a variety which is fairly tough and close-grained. The wood must necessarily be thin, or the article when finished will look heavy and clumsy. Three-sixteenths inch is the limit of thickness which can be used, and if a hard wood has been selected one-eighth inch is recommended. A sound piece of Padouk is a suitable wood to try, as its rich red grain will harmonise well with the general colour of the Cruet Fittings.

It is safer to use this wood in three-sixteenths inch thickness. Mahogany is also a suitable wood, but the colour is unpleasant unless highly polished; it may be used in one-eighth inch. Satinwood can be suggested to those who prefer a yellow wood. White is hardly recommended, as the Cruet Stand will probably be used every day, and would thus readily get soiled.

Directions for fitting up are given on the Design Sheet and need not here be repeated. Careful handling is required throughout, although there is no part of the work difficult. Fine saws should be used in cutting, and the spirit of the curves carefully preserved. The two large pieces may easily be cut together, and it will be found that the Stand can be made from one of the interior bits of waste wood.

This is a Pattern which should prove decidedly popular amongst Fretworkers. When cut out, it is not only an Ornament, but makes a thoroughly serviceable article.

Before the Diagrams were prepared, we were at great pains to secure a handsome but inexpensive set of Cruet Fittings, and the Design was specially arranged to suit these.

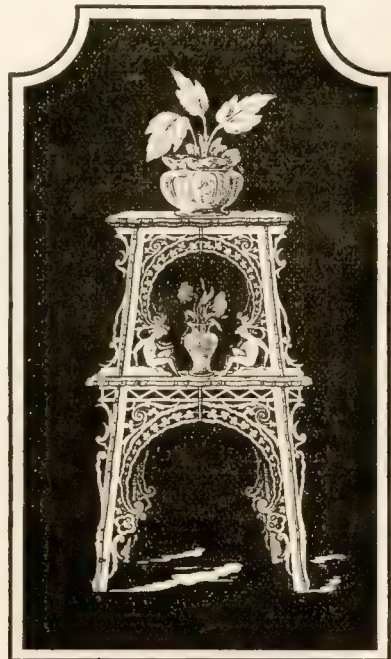
One particular advantage which the Pattern can claim is that it may be cut out and fitted up in a few hours, and at a trifling cost. About one foot of wood will be sufficient, and the Fittings may be purchased at a figure which is easily within the reach of every amateur. The Cruet Stand, when made, will form an excellent article for a present, and at Bazaars or Fancy Fairs it will easily sell for at least three times its actual cost.

The sets of China Cruet Fittings which we supply consist of Pepper and Mustard Pots and Salt Cellar; they are in the Rococo style, are handsomely mounted and painted in gold and colours, and are supplied with nickel-plated spoons. The complete sets will be sent out securely packed in boxes, and post free, for 2s. 3d. Address, The Manager, *Hobbies* Supply Department, Bouverie House, Salisbury Square, London, E.C.

NOTE.—We should explain that we have meanwhile only been able to secure *one gross* of these sets. A large additional supply has already been ordered, but it will be fully a month before they are to hand. Readers will therefore do well to send their orders at once, as they will be executed in the order in which they are received, and late letters must necessarily stand over until the arrival of our additional consignment.

[Additional copies of this Cruet Stand Design may be had, price *Threepence* each, from the Publishers of *Hobbies*, Bouverie House, Salisbury Square, London, E.C.]

No. 27. OCCASIONAL TABLE.



With the first number of our new Volume we shall give away with each copy of *Hobbies* a Fretwork Pattern for a small Occasional Table, of which the above sketch is a miniature.

Photographic Hints for Amateurs.

A GOOD BLACK VARNISH.

Dissolve 23 parts shellac in a hot solution of 8 parts of borax in 125 parts of water, gradually stirring in sufficient lamp-black until depth of colour desired is secured. This will be found useful for blocking out on the negative.

DARK BLUE OPALS.

It is possible to bring the ordinary gelatino-bromide opal to a dark blue colour by toning, after development, to the shade required with gold. They can also be tinted by dipping in a solution of ferrocyanide of potassium, and afterwards in a solution of iron.

TEN PER CENT. SOLUTION OF PYRO-SODA.

In order to make an almost exact ten per cent. solution, dissolve 1 oz. (avoirdupois) of pyro and 4 ounces of sodium sulphite in about 1 oz. of water, and make up to 9 ozs. with water. The solution should be made slightly acid as a preservative. If possible use distilled water, although it is not absolutely necessary.

TONING BATHS.

There are many good toning baths—here is the formula of one by Mr. Andrew Pringle:—

Borax Bath—

Borax	3 drachms
Water (boiling) ..	35 ozs.
Chloride of Gold ..	15 grs.

This bath is ready for use when cooled down to 60 degrees Fahr. It gives rich tones and keeps well. In practice it may be diluted.

A GOOD MOUNTING BRUSH.

This should be about one inch wide and an inch and a half long in the bristles, flat in shape, the bristles well fastened so as not to be liable to come out. It should have a thickish handle, so that the fingers do not get cramped when using it. The most suitable form of brush is sold by artists' colourmen, and is known as a hog hair brush. No. 12 is a useful size. After use thoroughly wash the brush in cold water, shake well, and put away out of the dust.

DEVELOPER FOR A BEGINNER.

A beginner requires a clean, easily-handled developer. Here is one that was given some time back in the *Junior Photographer*; it has the following distinct advantages:—(1) Cheapness, (2) Economy, (3) Cleanliness, (4) Simplicity, (5) Powerfulness. The component parts are:—

No. 1.

Hydroquinone ..	160 grains
Sodium Sulphite ..	2 ozs.
Citric Acid ..	60 grains
Potassium Bromide ..	40 grains
Water to ..	20 ozs.

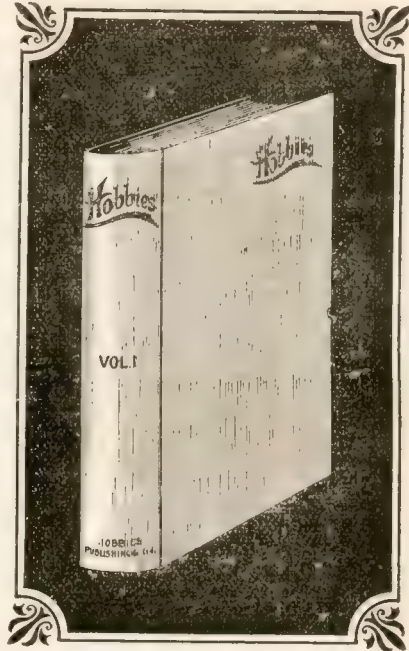
No. 2.

Sodium Hydrate ..	160 grains
Water to ..	20 ozs.

In use, as a rule, equal parts may be used. No. 1 gives density and No. 2 detail.

Covers for Binding Hobbies

A large number of our readers will no doubt wish to bind their copies of *Hobbies* in order to preserve them in a permanent form. We have therefore had a quantity of strong and serviceable covers prepared for this purpose. They are made in a handsome shade of red cloth, and the lettering on the back and side



is in gold. We will send them safely packed and post free for 1s. 3d. each. This price will include an Index for the first volume, which concludes with the present number. Any reader who may wish for a copy of the Index alone can have one sent packed flat and post free for threepence.

5/- Post Free.

5/- Post Free.

BEST QUALITY FRETWOOD

Planed and Sandpapered by our Special Machinery.

WARRANTED DRY, SOUND, AND CLEAN.

Last Special Offer THIS SEASON.

For 5/- Post Free, we will send

1 3-ply Panel Bird's-eye Maple, 18in. by 18in., value 1/6	
2 square feet Black Walnut	
2 " " fine figured Lacewood	} all 3/16 in. thick.
2 " " Satinwood	
2 " " Flowered Oak	
2 " " Mahogany	

Customers can choose from the following kinds:—CHESTNUT, Koko, Canary, Red Birch, Cinnamon, Cedar, Teak, and many others.

SEND AT ONCE. PARCELS SENT PER RETURN.

STAR SAWS, 1/6 PER 6 DOZ. SWISS SAWS, 10d. PER 6 DOZ.

WOOD AND TOOL LISTS, 1d. STAMP.

HINDLEY & JONES, Fretwork & Tool Stores,
NORFOLK MARKET HALL, SHEFFIELD.

A New Home Art.

MARETTA WORK.

IF this title is attractive, so also is the work to which it relates. Certainly nothing quite like it has ever before been put before the public, and its appearance does not suggest how inexpensive it is, and also how easy of execution.

Marettia carving, or Marettia work as this novelty is called, is carried out upon articles made of a specially prepared soft material, upon which all that the amateur has to do is to score deeply the outlines of a certain design, which is afterwards to be painted in whatever manner may be thought most suitable. The Marettia ware somewhat resembles linoleum in touch and appearance, and of it are made plaques, panels, frames, watch stands, boxes, and many other articles. An expert draughtswoman, wishing to try this work for the first time, can buy a plaque or other article with a perfectly blank surface upon which she may trace any original design she chooses; but, since the extra expense is very trifling, it is better for her to buy something already traced for working upon, or even to invest in an inexpensive box containing a painted specimen, a plaque for experimenting upon, lacquer, chisel, stone (for sharpening the chisel occasionally), and full instructions.

The work, as before said, is executed upon a soft, leather-like surface, having a design marked out upon it. This design the worker must carefully follow with the chisel, a small instrument like a gouge, which carves out a narrow channel, or trench, all along the outlines. The method of holding the chisel is shown in Fig. 1, and, as



FIG. 1.

may be imagined, few difficulties attend its use. A little practice will show the worker that the more pressure she puts upon her implement the deeper will the miniature trench be, and the heavier the after shadows when painted. The gouge is held almost horizontally above the surface and moved from the worker outwards, care being taken not to cut too deeply, and to graduate the depth of the incised furrows according to the outlines of the traced design. When a line is to be followed which is much deeper at one end than at the other, it is well to begin at the broader part, and to shave off less and less along its length till the fine tip, which is often little more than a scratch, is reached.

When assured that all the chisel work is completed and no lines left uncut, the next thing to do is to add a coating of foundation lacquer, which is prepared in three colours—brown, green, and maroon, any one of which is pretty,

and forms a good background for painting. The lacquer must be evenly put on, and care taken that it fills up all the carved lines. It is sold in bottles, the cork with a piece of sponge like that in bottles of boot polish.

When the lacquering is absolutely dry and not "sticky," then begins that part of the business which to some workers will prove the most interesting—this is the painting. It is executed in the usual manner with ordinary oil-paints or enamels, care being taken to keep within the carving which outlines the design. Any number of tints can be used, but elaborate shading is not called for. Unless the Marettia worker has many colours of enamel by her, or is executing large quantities of the painting, oil colours are to be recommended as being cheaper and affording more varieties of tint.

A sketch of a little box made in the material here described is given in Fig. 2, and the colour-



FIG. 2.

ing shall be mentioned as a guide to those about to try the work. The design is decidedly conventional, though the tints used approach to those of nature. The bird is blue, shaded with black, and with the throat and chest white; the stems of the rose wave somewhat eccentrically, but are painted partly in green, partly in red; the flowers are in shades of pink, deepened in the hearts; the leaves are in tints of green, the veins being very slightly curved. These colours, on the dull brown background of the box, are perhaps the most effective that could be used; in fact, considering that all the lacquers are dark in tone, pale tints may be recommended for the painting.

As a variety the outlines may be traced out with the gold which is sold for the purpose, or with lustre paints. Jewel powder also, specially prepared, is to be had, and will find favour with those who like a sparkling effect introduced into their painting. The time for applying this is after the colours have been laid on and before these are perfectly dry. The glittering dust is sprinkled over the still moist surface, to which it firmly adheres. Judgment must be exercised in powdering the material evenly, not putting too much in one place and too little in another, as it cannot, when once it has fallen on the paint, be removed without injury to the work.

Such then is the new Marettia Carving, which will commend itself to many on account of its simplicity and inexpensiveness. Finger plates, plaques, trinket, handkerchief, glove, and stamp boxes, and many other similar knicknacks are all to be had ready for decorating, and can be done very quickly with excellent results.

How to make

~ a Hektograph.

ONE of the very useful inventions of the nineteenth century is the "Hektograph," or apparatus for copying drawings and writing. The copier which is about to be described will reproduce anything which is in a moderately plain style. As the patent expired during the December of 1894, our readers are quite at liberty to make and use the article. The first part to be made is the frame. This should be a well seasoned piece of hard wood about 12 inches by 15 inches, and $\frac{3}{4}$ -inch thick, and should be planed and sanded to make a level surface.

Procure a piece of wood about 5 feet long, $1\frac{1}{2}$ inches wide, and half-an-inch thick. Cut from this two pieces 15 inches long, and two pieces 12 inches long. Then cut the ends so that when the pieces are screwed together they will make a rectangular frame the same size as the base piece.

Now procure a couple of brass hinges and screw them first to the base and then to the frame. The object of these hinges is to allow the frame to be opened in order to admit the prepared paper. A brass catch should be put on the front to keep the frame tightly closed when required. The frame should, if possible, be polished, as this gives it a more satisfactory finish. The illustration shows the apparatus complete.

The copying sheets can now be made, and for this about a dozen sheets of stout white blotting paper the same size as the frame will do. The following mixture must then be prepared:—mix three parts of ammonia in five parts of water, and soak four parts of best glue in it until quite soft. This is put in a jar or can, which is placed in boiling water until thoroughly melted, after which eight parts of glycerine and three parts of fine sugar may be added. The mixture is then poured into a large shallow dish and kept hot. The sheets of blotting paper are floated on the surface, and when saturated may be removed and placed jelly side up on a flat level surface. When all are coated, they are again floated on the mixture to give them a second coat and to give a smooth level surface. Should the surface not be sufficiently smooth, they must be given a third coat, which ought to prove sufficient. A few drops of oil of cloves added to the mixture will preserve it from bloom and consequent decay. The copying sheets are now ready for use.

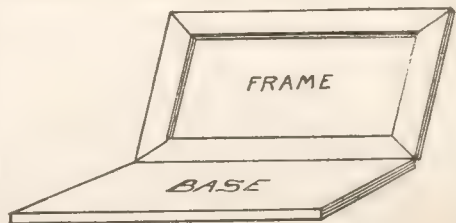
The next requisite is ink; violet will be found the best for giving the largest number of copies. To make this, mix one part of aniline with one part of alcohol in seven parts of water. There are several other colours which might be used, but it will be found better to purchase them ready-made.

To use the copying apparatus, procure some highly-glazed paper and write or draw the chosen subject on it with a steel pen, which must be kept well supplied with ink.

One of the prepared copying sheets is now placed in the frame, and the coated surface

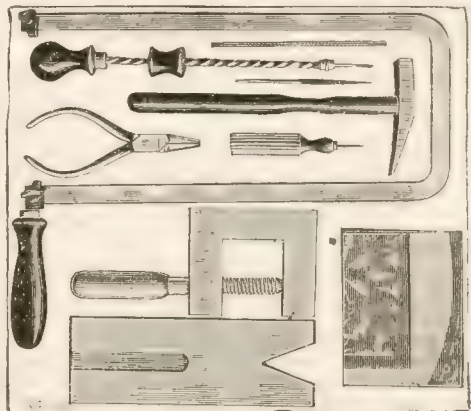
damped by drawing a slightly moistened sponge over it. A piece of clean newspaper is then laid on the damped surface, smoothed down with the hand and then removed. This must be repeated until the paper "drags," when the apparatus is ready for use. The written paper is very carefully laid on the surface of the jelly, care being taken to exclude all air bubbles, and the hand is rubbed gently all over the back of the written paper, or, as it is termed, the negative. This is left on the jelly for about two minutes, after which it is carefully removed by lifting one corner with the finger nail and then peeling it off.

Strips of paper should be laid on the jelly to serve as guides, so that all the copies may be registered correctly. A piece should be placed where the finger nail raises the copy; this prevents the jelly from being destroyed.



Printing may now be proceeded with. The paper should be laid to the marks and then gently smoothed with the hand. The first few copies will only require a very light touch, but the last ones will require a heavier contact of about fifteen seconds duration. The apparatus will, perhaps, print about one hundred copies, but for clear work fifty will be enough. After using the copying sheets they should be laid aside for some time, during which the ink will be absorbed and the sheet be ready for another negative.

TOOLS DIRECT FROM SHEFFIELD.



The above illustration represents my Fretworkers' Outfit, sent post free for 2/9. Wood Carvers and Fretworkers send direct for your tools and get SHEFFIELD-MADE tools at SHEFFIELD PRICES. The engraving above is a sample of the value I offer you. Illustrated Catalogue, p. 21 free, 2 stamps.

T. H. TAYLOR, Tool Merchant, Sharrow St., SHEFFIELD.

"HOBBIES" COUPONS TAKEN.



*. All communications to be answered in these columns should be marked "Correspondence," and must be addressed to the Editor of *Hobbies*, Bouverie House, Salisbury Square, London, E.C. In no case can we reply to enquiries by post.

FRETWORK, CARVING, &c.

F. J. WOOD.—Any of our advertising Fretwork firms will supply you with a dust blower for your Treadle Fretsaw.

Boz.—Such a Pattern as you require would have to be specially drawn. We expect shortly to have some articles on how to make an aquarium.

J. J. M.—If your Victoria is for competition we fear this answer will reach you rather late. Seeing you are using two woods, you had better take the Maple for the washers if the wheels are of Padouk.

W. HIGHAM.—Instead of a globe to cover your Victoria, we would suggest a glass case such as models at museums and exhibitions are placed in. All you require is a good solid base and a light framework, glass being put in all four sides and also on the top. The woodwork would have to be grooved and could be ebonized. The case should be about 6 inches longer, 4 inches wider, and 3 inches higher than the actual model.

R. BOOLE.—To fix the glass in mirror and photo frames much depends on the article. In Patterns such as our Calendar and Pipe Rack Designs the simplest plan is to cut out the hole exactly the size of mirror, place in the glass, and glue a piece of thin veneer (or cardboard) over the back. Sometimes the glass is simply glued to the wood and an overlay border cut to go round it. With photo frames, if the opening is of a regular shape, the glass may be cut to size and made to fit in tightly, but the safer plan is to fix a light framework at the back, into which the glass and photograph slide.

NEW ROGER.—When Fretwork Patterns are printed in a solid colour the saw blade should follow the extreme outer edge, but must not go beyond it. When the Design is in outline with a green tint, such as many of the *Hobbies* Patterns, the black line is followed. As a rule the line is just about the thickness of the saw blade, and the object of this method of printing is to give a clear line which the Fretworker can keep to. If the line should be printed too thick the outside edge of it must be followed. When you trace Patterns it is always better to draw the line which you wish the saw to follow.

PHOTOGRAPHY AND LANTERNS.

W. BUTLER.—If you let us know exactly what class of Slides you require we will see what can be done.

MOUNTONE.—The cost of such mounts as you require would be from 6/6 for cabinets and 8/6 for cartes-de-visite per 100.

CECIL BROWN.—We have complied with your request and sent particulars of chemicals, &c., actually required to start Photography.

W. H. COLLINSON.—The work done with the Hand Camera is most creditable. Could you send us a short description of how you made your Camera?

CONSTANT READER.—(1) The lens of a telescope would not be suitable. (2) The cost of a lens varies according to the make, size, and purpose for which it is to be used. (3) *Hobbies* Supply Department would execute your commission if you write fully. (4) As soon as we can, articles will appear on "Hand Camera Making."

A. TYRO.—(1) The interior is badly lighted. The sitter should not have put his elbow on the piano: note the ugly shadow it throws across his face, the light has been too strong. The other prints are from fairly good negatives. The spots are probably due to faults on the negatives; what these are, without seeing them, it is impossible to say. (2) Both papers, if the makers' instructions are followed, will give excellent results.

STAMPS.

J. R. J. (Portmadoc)—The "Consular Service" stamps you describe are of no value whatever to a Philatelist.

H. H.—Your 1d. plate number is quite a common one. Only Nos. 182, 158, and 225 are worth hoarding in the used condition. The black stamp you describe is the ordinary English black penny of the first issue, worth, unused, 1/-; used, from 3d. to 2d.

A. H. (South Shields)—English penny stamps of 1864 are worth just nothing at all. On the other hand, the English used at Malta and other British dependencies are now being made the subject of special study by English specialists. We should be glad to see those you have, or to get an exact list of them.

E. L. F.—The fact that you are limited as to means need in no way damp your philatelic ardour. Bargains are always to be picked up by the alert collector. Chili is a country that should suit you admirably. By a judicious investment of your pocket money you should be able to get a very decent accumulation of Chilians within six months.

C. B. J. (Sutton)—From a strictly philatelic point of view your wrapper, stamped "Rawtenstall Penny Post," is of no value whatever, but as a postal curiosity it should be worth a shilling or so, perhaps more. You and all other readers probably know that there were penny posts in this country before the name of Rowland Hill was ever heard; but they all lacked that "keystone of the arch of postal organisation," the adhesive postage stamp.

MISCELLANEOUS.

S. E. B.—Popeck's *Model Engine Making* costs 2/6. We can obtain it for you.

T. D.—Yes, we have got a series of articles on "How to Make an Aquarium" ready.

A. SIMPSON.—Such a burglar alarm as you speak of would require to be specially adapted to the lock. We do not think that ready-made alarms of the sort are supplied.

H. HOPKINS.—It is impossible to answer your question fully without having particulars of the model steam engine you are making. What is the size and what power do you want?

CONSTANT READER wants to know how he can make "A liquid self-polishing harness blacking that will dry very glossy and be waterproof." Can any other constant reader help him?

G. H. C.—We would gladly give you any suggestions as to fitting up a Boys' Stall at a Bazaar, but we must know some particulars as to how much you are going to spend, etc. Please write fully, giving your name and address, and we will send an answer direct.

PRIZE Competitions

Victoria Competition.

We have received such a very large number of Victorias that it may possibly be a fortnight before we can publish the names of the successful competitors. We greatly regret that owing to insufficient care in packing many of the models have been broken in transit. In very few cases does the damage seem to be beyond repair, and in every case we shall make an effort to re-pack the articles carefully.

We hope to announce the result of the Bent Iron Work Competition shortly.

Photography.

Every month we give a prize of TEN SHILLINGS for the best PHOTOGRAPH, and FIVE SHILLINGS for the second best. Subject for this month—"Shipping and Marine View." The print may be by any process, and from any sized negative up to whole plate. Photographs cannot be returned, and we reserve the right to reproduce any of them in *Hobbies* if thought desirable. Photographs for this Competition must be sent to our office not later than April 30th, marked "Photograph."

Wood Carving.

For the best CARVED BLOTTER BOOK COVERS, made from Presentation Design No. 15, we offer Two Prizes:—

First Prize—ONE GUINEA.

Second Prize—SET OF TWELVE SUPERIOR CARVING TOOLS.

The choice of wood and method of carving and finishing are left to Competitors.

Only one side of the Blotter should be sent, and the Carving should not be made up in book form.

Every Competitor must write his or her name clearly on a label which should be pasted to the back of the article.

Articles sent in for Competition will be returned if desired, and for this purpose fully stamped and addressed labels must be enclosed. Blotters cannot be returned unless sufficient stamps are sent.

Articles should be marked "Blotter," and must be received at our office not later than April 30th.

Notice to Competitors.

All Articles, Sketches, etc., for Competition should be addressed to the Editor of *Hobbies*, Bouverie House, Salisbury Square, London, E.C. The name and full address of Competitor must in every case be sent.

NOTE:—No correspondence can be entered into with Competitors, and all awards made will be final.

SEVEN INTERNATIONAL MEDALS SECURED.

FRETWORK AND CARVING.

THREE GOLD MEDALS, TASMANIA.

PRIZE MEDAL, ANTWERP.

THREE PRIZE MEDALS, AMSTERDAM.

No other Firm in the United Kingdom has obtained an award for Fretwork Materials or Designs at any International Exhibition.



SEE OUR NEW

CATALOGUE

for full particulars of Treadle Fretsaws, Lathes, Hand Machines, Hand Saws, Saw Blades, Tools, Designs, Wood, and all materials required for Fretwork, Wood Carving, Bent Iron Work, etc. Our Catalogue is a fully illustrated book of sixty-four pages, and contains instructions for Fretwork, Wood Carving, Bent Iron Work, Polishing, and Varnishing.

The Price of our Catalogue is

SIXPENCE,
and with each copy will be

GIVEN AWAY FREE

a Design for a Fretwork Model of the Clock Tower of the Houses of Parliament, commonly known as "Big Ben," the published price of which is one shilling.

Send at once SIXPENCE for Catalogue and Presentation Design.

J. H. SKINNER & Co.,

H Dept., DEREHAM, Norfolk.

How to make Photographic Enlargements.

EXPOSURE, DEVELOPMENT, &c

AS we must conclude our series on Enlarging in this number, we will deal only with enlarging upon bromide paper. This paper is coated with a gelatine emulsion sensitised with bromide of silver, and is sold ready for use. There are several brands upon the market, all of them eminently suitable for the purpose. The paper is known as "slow" or "rapid," "rough" and "smooth."

The "slow" paper should be used with a strong illuminant, limelight or daylight, both being intensely actinic; the "rapid" on the other hand is better suited for enlarging by oil or gaslight. It is not desirable to keep a large stock, as the paper can be bought of any dealer in cut sizes; it is likely to deteriorate by keeping and is quickly spoilt by damp. To discover the sensitive side an easy test may be made by moistening the corner of the paper, when it will be found that the side coated with gelatine will be gummy and stick to the fingers. Another sign is that the coated side will, upon taking the paper out of the packet or roll, always curl inwards.

The question of texture—rough or smooth—is a matter for individual taste. To-day prints on rough paper are the vogue, to-morrow the fashion may change. Landscapes and seascapes look well on rough paper. Architecture, domestic photography, and portraits are much better printed on smooth paper. There is, of course, great latitude in bromide printing, and a hard and fast rule, as to either texture or tone, cannot be laid down.

In using a special brand it will be well to test the speed by making test exposures, and not blindly to accept the maker's figures. The exposure, as we have before said, is not only a

matter of the light, but of the actinic value of the light; exposure and development are important factors and each influences the other. Taking ferrous-oxalate as normal, in using metol or eikonogen, the exposure will be reduced very considerably, as much possibly as one-third. The condition of the negative, density and colour, have all to be considered in fixing the length of the exposure to be given—a thin negative, using a good oil lantern, may require from one to two minutes, but a dense negative may need anything from ten minutes to half an hour. In Table A are a few examples given by Mr. Wheeler.

The table below gives a very good idea of the exposures for enlarging by artificial light, and the illustration shows an enlarging camera with lantern. A is the lantern which may contain either oil light, limelight, or an incandescent gas burner; B shows the condenser; C the back of camera, c the position of negative; and D the camera itself. There are many forms of enlarging lanterns, but the principle is the same in all: the light passes through a condenser on to the negative, and the lens projects the image on to the sensitive substance—paper or glass—upon which the enlargement is to be made. It is possible to enlarge without a condenser, and we hope to give an article showing the method at some future date. With a condenser it

should be understood that the diameter of the cells must be such as to permit of the equal illumination of the whole field of the negative; to enlarge from a quarter-plate negative the condenser must not be less than $5\frac{1}{2}$ inches in diameter, and for a half-plate

negative the condenser will need to be 8 inches in diameter.

We will now proceed to the developing. Our bromide paper has been exposed, and it will be understood that the image—which is a positive when developed—is seen during exposure, and some idea can be formed as to what the picture will look like. This having been done the cap is put on the lens, and the paper taken off the easel so soon as the developing solutions are made up—provided this is not already done—and the paper is immersed in a bath of clean water. To do this the paper should be drawn through the water, turned over, and pressed down in

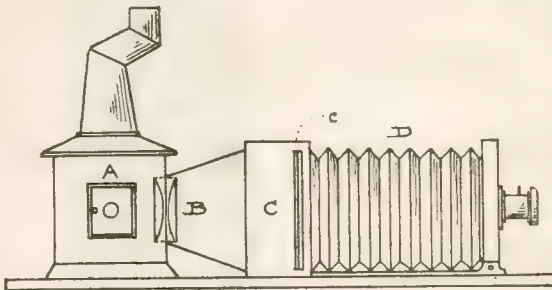


TABLE A.

Size of Negative.	Size of Enlargement	Illuminant.	Paper.	State of Negative.	Exposure.	Result.	Stop.
1-plate	15 × 12	Oil	Rapid	Medium	20 min.	Under Expo.	f/11
"	12 × 10	"	Slow	Very thin	3 "	Good	f/9
"	15 × 12	"	Medium	Medium	30 "	Correct	f/11
"	15 × 12	"	Slow	Medium	60 "	Excellent	f/9
"	15 × 12	"	Rapid	Thin	7 "	Right	f/9
"	12 × 10	Gas	Rapid	Dense	5 "	Good	f/16
"	15 × 12	"	Rapid	Dense	60 "	Good	f/16

order to ensure it being soaked all over. When the paper is thoroughly soaked place it in another dish, face upwards, and pour on the developer. Rock the dish carefully so that the solution flows over the paper, but at no time leave it exposed or uncovered by the solution. A gradual development of the image will result. This rocking must be continued until development is complete and the high lights and shadows show up in proper gradation; the paper is now removed and put into a clearing solution, which will vary slightly in accordance with the developer used. Development may be accentuated by applying the developer to the paper locally with a camel hair brush dipped in water made slightly acid. Fixing will follow clearing, and the bath may be one part of hypo to five parts of water, with acid sulphite of soda added to the extent of half an ounce to one quart of the saturated solution of hypo.

The developing agents are many and the formulæ legion. We will give one or two examples:—

(ILFORD) FERROUS OXALATE.

No. 1.

Neutral Oxalate Potash ..	1 lb. avoird.
Warm Water ..	64 ozs.
Bromide Ammonium ..	20 grs.

No. 2.

Sulphate of Iron ..	1 lb. avoird.
Warm Water ..	48 ozs.
Citric Acid ..	$\frac{1}{2}$ oz. avoird.

The above should be filtered and allowed to cool. In use take 1 oz. of No. 2 to 6 ozs. of No. 1.

(EASTMANS) FERROUS OXALATE.

No. 1.

Oxalate of Potash (neutral) ..	1 lb.
Hot Water ..	48 ozs.

No. 2.

Proto-sulphate of Iron ..	1 lb.
Citric Acid ..	$\frac{1}{2}$ oz.
Hot Water ..	32 ozs.

No. 3.

Bromide Potassium ..	1 dram.
Water ..	10 ozs.

These solutions are only to be mixed when used. To 6 ozs. of No. 1, add 1 oz. of No. 2 and $\frac{1}{2}$ dram. of No. 3.

(WHEELER) METOL.

No. 1.

Metol ..	60 grs.
Sulphite of Soda ..	1 oz.
Potassium Bromide ..	10 grs.
Water ..	10 ozs.

No. 2.

Potassium Carbonate ..	1 oz.
Water ..	10 ozs.

To make 2 ozs. of solution take $1\frac{1}{2}$ oz. of No. 1 and $\frac{1}{2}$ oz. of No. 2. In making up No. 1 dissolve the metol in the water first, then complete the formula.

(ILFORD) HYDROQUINONE.

No. 1.

Hydroquinone ..	160 grs.
Bromide of Potassium ..	30 grs.
Sulphite of Soda ..	2 oz. avoird.
Water to ..	20 ozs.

No. 2.

Soda Hydrate ..	100 grs.
Water ..	20 ozs.

For bromide paper use one part each of No. 1, No. 2, and water.

(CHAPMAN) EIKONOGEN AND HYDROQUINONE.

No. 1.

Hydroquinone ..	40 grs.
Eikonogen ..	120 grs.
Sodium Sulphite ..	480 grs.
Citric Acid ..	20 grs.
Distilled Water to make ..	20 ozs.

No. 2.

Potassium Bromide ..	5 grs.
Sodium Carbonate (pure) ..	60 grs.
Sodium Hydrate ..	30 grs.
Distilled Water to make ..	20 ozs.

Mix in equal proportions, and add an equal quantity of water.

We have given a sufficient number of examples for our readers to try their "prentis" hand; not that we advise inconstancy—rather prove your developer and use no other. There are many matters which we should like to have touched upon, but Vol. I. of *Hobbies* ends with this number, and it was thought desirable not to carry this particular section of photography into Vol. II. In the next issue we shall commence a series of elementary and practical articles upon "How to Photograph," and shall in due time reach the subject of enlarging again. In the meantime any special points that, owing to the short space at our disposal, have been overlooked we shall be glad to explain, and also to give further hints as to fitting up a room for enlarging, building an enlarging camera or lantern, making accessories, &c., also to give advice as to purchase of apparatus and materials.

TO AMATEUR PHOTOGRAPHERS.

Mounts! Amateurs' Parcels! Mounts!

THE BEST AND CHEAPEST OBTAINABLE.

Very large stock of all descriptions of Photo Mounts for C.D.V.s, $\frac{1}{2}$ -plates, Cabinets, $\frac{1}{2}$ -plates, Whole plates, and larger sizes, comprising Bristol, Enamel, and Gold Bevelled-edge. Particulars on application.

ASSORTED PARCELS FOR AMATEURS, Free by Parcels Post, 6d., 1/-, 1/6, 2/6, 3/6, 5/-, 7/6, 10/6, 15/-, and 21/- Only from—

ED. PECK, Wholesale Photographic Chemist, EAST DEREHAM, NORFOLK.

☛ "HOBBIES" COUPONS TAKEN. ☛

CAN YOU WRITE?

Of course you can! Why not then emboss your Notepaper, etc., with a pretty Monogram? using the **PATENT POCKET MONOPRESSE** Every Initial and Monogram of two letters kept in stock. Monogram of two letters 1/1; Initials 10d. each, post free. Apply—

CHAS. ROMPLER, 7, New Basinghall St., London, E.C. AGENTS WANTED.

£20

TORACONISTS COMMENCING. See Illd. Guide & Catalogue (25 pgs.) 8d., "How to open a Olgar Store, £20 to £2,000."—Tobaccoists' Organising Co. (Reg.), 188, Euston Rd., London, N.B.—Shopfitters and showcase makers for all trades. (Over 50 years reputation). Mgr., H. Myers.

FOR Sale, and Exchange.

*. The charges for advertisements (prepaid) in this page will be sixpence for every twelve words or less, name and address inclusive, and one halfpenny for every additional word. Single letters, initials, and figures are each counted as a word; but undivided numbers (as 153), and prices (as 10s. 6d.) count as only one word each. In every case the name and address of the advertiser must be given for publication, and we cannot at present undertake to supply a private name or number and receive replies to advertisements at our office. All advertisements must be accompanied by remittances, otherwise they cannot be inserted. Whenever possible, payment should be made in Postal Orders, and not stamps. Letters should be marked "Advt.," and must be addressed to the Publisher, *Hobbies*, Bouverie House, Salisbury Square, London, E.C.

NOTE.—Trade Advertisements can only be inserted in this page at the rate of one shilling per line.

Aome Electric Bell Set, comprising 2½ in. Electric Bell, Quart Leclanche Battery, Push, 50 feet Wire, Staples, Instructions, 4/6; better value impossible.—Electric, Lord Street, Openshaw, Manchester. H. 7.

Any Electrical Apparatus wanted in exchange for three first-class short-faced Tumblers, or sell.—A. Bruce, Park Road, Brechin.

Climax Hand Fret Machine, one of Skinner's, new February, cheap, 7/6; also a good Concertina, 3/6; and a good Keyless Watch, cost 17/6 January, in going order, cheap, 13/6. Money wanted.—R. Boole, Hermitage, Mansfield.

Electric Lamps, 2-volt, 6d., three for 1/3; Lamp-holders, 4d.; Reflectors, 3d.; 4-volt Pocket Accumulators, improved system, 5/6.—Whiting, 109, Fore Street, E.C. D. 4.

"Electricity," 1d. weekly. Practical, chatty, and interesting. Order it from your newsagent or bookstall. D. 1.

Free.—20 different U.S. to all applicants for sheets, enclosing postage; 100 different stamps, 5d.—Rhodes, Rammas House, Otley. B. 2.

Free.—Pocket Rubber Stamp of your Name and Address; also particulars of the best paying Agency going for whole or spare time.—Richforde's Company, Snow Hill, London. D. 4.

Free to Applicants for my well-selected approval sheets, 30 rare stamps, including Japanese (silver wedding), Congo (bay), Persia (rare), Johor, Perak (tiger), Egypt (rare Interpostal), etc., etc., worth 2/-; thousands of prizes to be given away free.—John Davey, Hatfield Peverel, Witham.

Fretwoods.—Walnut, Mahogany, Teak, &c., 2½d. and 2½d. per foot.—Pallion, Sawmills, Sunderland. H. 2.

Fretworker's Complete Outfit, with wood. What offers?—Bateson, 30, Bolton Road, Westthoughton.

For Sale.—A Campbell's Peerless Patent-stop Accordion in mahogany case, bargain, 30/-.—F. J. Thomas, 25, Severn Road, Cardiff.

Hand Cameras (Victoria) to carry 12 ½-plates, splendid results, easily manipulated, with view finder, post free, 5/6.—H. Fowler, 202, Victoria Park Road, Hackney. B. 2.

How to make an Electric Night Light that will work well for years without attention, post free, 6 stamps; also how to attach an electric alarm to a clock, 6 stamps.—James, 11, Stanbury Road, Peckham, S.E. C. 1.

How to learn and start a light artistic business that will produce a living without previous knowledge on the small capital of one pound. Complete instructions, post free, 12 stamps.—James, 11, Stanbury Road, Peckham, S.E. C. 1.

Long Photo Frames to hold six ½-plates, 6d.; ½-plates 7½d. each.—Pallion, Sawmills, Sunderland. H. 2.

Model Yacht, 3 ft. long, 5 ins. beam, and 9 ins. deep, schooner rigged, cheap, 6/-.—T. Haycocks, 100, Northumberland Street, Liverpool.

Musical Box.—20 airs, Zither accompaniment.—Tricker, 30, Church Road, Battersea, London.

New and Second-hand Type, cheap. Lists free.—Young, 107, Chandos Road, Stratford.

New Book of Instructions in gliding, graining, mixing paint, French polishing, picture-frame making, mount cutting, etc., 1,000 valuable recipes, free, 1/3. Decorators' Assistant, 600 recipes, free, 10d.—McQuhae, Cockermouth, and all Booksellers. ZM. 3.

Opera Glasses on sale in case, 4/-.—J. Suthurst, Rough Hill, Jericho, Bury, Lancashire.

Postage Stamps.—Edward W. Drury, Westholme, Hesse, E. Yorks., is a buyer of rare stamps; high prices paid. G. 3.

Rotary Fretwork Machines, attaches to any table, perfect order, take 2/6.—Farrington Photo Company, 67, Farrington Road, London.

Second-hand Cycles.—Solids from 12/6; Cushions, 25/-; Pneumatics £3 10s. Kodak Cameras supplied. Our 1896 Road Racer, Dunlop Tyres, weight 29 lbs., Cash £10. See our Fretwork Advt. in No. 20.—Lund, Cycle Agent, Bradford.

Special Advantage to Amateurs.—Best Stains on the Market. All Woodworkers should send stamped address for prices to Weaste, 121, Lomax Street, Rochdale. B. 2.

Stamps Wanted. Good prices paid. Try our famous approval sheets.—Phoenix Stamp Company, 31, Radnor Street, Peckham.

Wanted.—Tit-Bit Camera in good condition; send particulars.—Silver, Letcomb, Wantage.

1895 Pneumatic Cycle, in good condition, cost £12, sell for £5 cash.—G. Williams, Eaton Hall, Congleton, Cheshire.

*. As we are obliged to go to press about ten days before the nominal date of publication, Advertisements must be received at our Office on Wednesday morning to ensure insertion in the following week's issue.

Terms of Subscription

	s.	d.
Three Months (including postage)	1	6
Six Months Do.	3	3
Twelve Months Do.	6	6

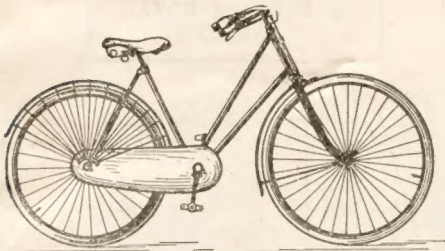
All letters relating to subscriptions or back numbers should be addressed to the Publisher of *Hobbies*, Bouverie House, Salisbury Square, London, E.C.

NOTICE TO CONTRIBUTORS.

The Editor of "*Hobbies*" is always ready to receive Suggestions for Articles for insertion in the paper. Any manuscript sent for his consideration must however be accompanied by a fully addressed and stamped envelope. Unsuitable contributions will be returned without avoidable delay, but it must be distinctly understood that the Editor will not hold himself responsible for the loss of any manuscript.

HOBBIES' BICYCLES.

Every Machine Guaranteed



HOBBIES' LADIES' BICYCLE, £11.

As fully explained in No. 24 of *Hobbies* we have made arrangements which will enable our readers to obtain really high-class and serviceable bicycles at a moderate price, and which will, we anticipate, at the same time prove a very valuable advertisement to *Hobbies*. We have entered into a contract with a firm of manufacturers who have a high and well-deserved reputation throughout the trade for the excellent quality of the material and workmanship which is put into their machines. We have, in view of the large number of bicycles we expect to dispose of, succeeded in securing exceptionally favourable terms, and, although we do not pretend to sell the machines at absolutely cost price, we are satisfied with placing upon them a very small profit, looking chiefly to the excellent advertisement the paper will receive from their sale. Our readers will therefore be able to obtain the machines at a far lower price than they could buy them in any other way, and they will, in fact, be securing a new bicycle of the first quality at the price of only a good second-hand machine. The offer is in every respect perfectly genuine, and is one of which our readers will be perfectly safe in taking advantage. The quality and workmanship of each machine is formally guaranteed by the maker. We have selected what we consider to be the most suitable machines, and full particulars with illustrations were given in *Hobbies* No. 24. We are offering machines for both ladies and gentlemen, the price for each being £11, while the *Hobbies* Coupons are accepted as part payment in accordance with the conditions laid down in the Weekly Presentation Supplement.

HOBBIES' ROADSTER, No. 2, £9 9s.

In deference to numerous inquiries we have arranged to supply a somewhat cheaper machine—the *Hobbies* Roadster, No. 2. This is very similar in appearance to the No. 1 machine, but is fitted with Clincher tyres and has direct spokes. The same guarantee applies to this machine as to the others. The price is only £9 9s., and *Hobbies* Coupons will be accepted in part payment. This is a wonderfully cheap and good bicycle.

FRETWORK & CARVING.

HIGHEST AWARDS AND GOLD MEDALS

received for our patterns in all parts of the empire.

The special advantages we enjoy, coupled with the enormous stocks we hold, places us A 1 for variety, quality, and price, three great things for purchasers to consider.

Our 2/6 Beginner's Outfit

Consists of

12 inch Steel Frame, 24 Saw Blades, 3 Files, 3 Designs, Awl, Cramp, Wood, and Instructions.

OTHER OUTFITS:

3/6, 6/- & 12/6 each.

Assorted Parcels of Fretwood, 12 feet, 4/-

POST FREE.

Books of Fret

AND

Carving Patterns

1/-

OUR NEW CATALOGUE containing 1,000 Illustrations of Fretwork, Carving, Picture Framing, Bent Iron and Bamboo Work, Designs and Materials, 8d., post free.

GIVEN AWAY.

With this New Edition of 20,000 copies, we shall present a finely finished pattern of the Crescent Wall Bracket.



HARGER BROS., Settle, Yorks.



MANUFACTURED IN 3 SIZES, AT

10/6, 16/6, & 25/-

EACH.

LADY HENRY SOMERSET

has much pleasure in stating that, after trying many pens by various makers, she has found none so thoroughly satisfactory as the SWAN FOUNTAIN PEN. This Pen is invaluable to her, and she has found that its use greatly facilitates her work.

A Pen as nearly perfect as inventive skill can produce.

We only require your steel pen and handwriting to select a suitable pen. Complete Illustrated Catalogue sent post free on application.

Mabie, Todd, & Bard,

93, Cheapside, E.C., or
95a, Regent Street, W. } LONDON.



(REDUCED FACSIMILE.)

NOTHING SUCCEEDS LIKE SUCCESS.

It is almost beyond belief, yet IT IS A FACT, that the SALE of HOVIS BREAD is over 1,000,000 Loaves PER WEEK, besides BISCUITS, SCONES, &c.

Highest Award at Food and
Cookery Exhibition,
LONDON, MAY, 1895.

SUPPLIED TO THE
QUEEN and ROYAL
FAMILY.

HOVIS

REGD.

BREAD & BISCUITS

6d. and 1s. Samples of
Bread and Biscuits on
receipt of Stamps.

MISS FRANCES E. WILLARD
says: "Hovis is a grand insti-
tution. I have almost lived on
it since I found it out."



PROMOTES
DIGESTION.

PROMOTE
DIGESTION.

IMITATION IS THE SINCEREST FORM OF FLATTERY.

The Public are cautioned against accepting from Bakers spurious imitations of "HOVIS," which, having met with such unprecedented success, is being copied in many instances as closely as can be done without risk.

If any difficulty be experienced in obtaining "HOVIS," or what is supplied as "HOVIS" is not satisfactory, please write, sending sample (the cost of which will be defrayed) to

S. FITTON & SON, Millers, MACCLESFIELD

BEWARE! Bakers recommending another bread in place of "HOVIS" do **BEWARE!**
so for their own profit.